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(54) Handset signalling time slot assignment plan for satellite mobile communication

(57) A mobile, satellite-based communication system (20) includes a defined signaling arrangement developed from an analysis of factors including movement of mobile terminals (28), movement of the satellite (22), beam discrepancies and duration of the call to the mobile terminal (28) to set up a frame assignment plan for time division multiple access (TDMA) carriers and identifying permissible frame offset which can be accommodated throughout the entire transmission. As a result, timing and frequency references from a mobile to mobile command may be provided from a reference source (24) along with receive and transmit data communications without losing the command signals or the communication information and providing highly efficient use of each carriers time slots for receiving/transmitting communication signals. Similarly, the signaling arrangement permits an efficient frame structure and a time slot assignment plan that does not require enhanced equipment at the mobile terminal (28). Moreover, the signaling frame assignment is applicable to multibeam satellite-based mobile communication systems for use with communications between mobile terminals (28) and gateways (24, 20) as well as between mobile terminals (28).

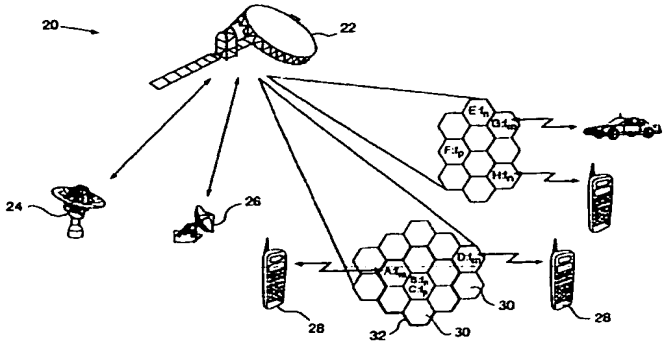

Fig. 1

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EUROPEAN SEARCH REPORT

Application Number
EP 97 10 1852

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	US 5 383 225 A (AGUIRRE SERGIO ET AL) 17 January 1995 (1995-01-17)	13	H04B7/185
A	* column 4, line 18 - line 26 * * column 4, line 9 - line 10 * ---	1	
Y	WO 95 24655 A (NOKIA TELECOMMUNICATIONS OY ;HEISKARI MIKA (FI); LEHMUSTO MIKA (FI)) 14 September 1995 (1995-09-14) * page 1, line 21 - line 34 * * page 2, line 30 - page 3, line 12 * ---	17	
Y	US 5 463 400 A (TAYLOE DANIEL R) 31 October 1995 (1995-10-31) * column 5, line 20 - line 23 * * column 6, line 25 - line 27 * ---	17	
A	GB 2 290 009 A (NIPPON ELECTRIC CO) 6 December 1995 (1995-12-06) * page 4, line 8 - line 20 * * page 6, line 22 - page 7, line 12 * -----	1-10, 17-20	

TECHNICAL FIELDS SEARCHED (Int.Cl.6)
H04B
H04J

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
MUNICH	19 June 2001	Draper, A

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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